

MONTANA WILD LIFE

The
BITTER
ROOT
MONTANA'S
STATE
FLOWER
"



COLVILLE
STUDIO - MISSOULA

OFFICIAL PUBLICATION OF THE
MONTANA STATE FISH AND GAME DEPARTMENT

The Valley Pines

*THE night wind greets the valley pines,
The clouds move 'way, the moon is full;
The breeze speaks low through twisting vines,
The night birds answer, harsh and dull—*

*And shadows come and slip away,
Hid' by a mist the moon floats on;
The pines they say, "We weep, we play"—
Mid golden tint the dark is gone.*

*The valley pines stand straight, stand high,
And thick and still, and the stars' ray
Slips through their boughs, again they sigh;
And grays the east—and comes the day—*

*At first long streaks of purple sheen
When sombre clouds float 'cross the sky,
The valley pines are silv'ry green,
Waving steepled tops on high—*

*Where trembling cedar nestles close,
Where blooms the glory of the sun,
Where violet keeps tryst with rose,
'Tis Nature's work, long since begun.*

*Pines guard the aged stones below,
Sentinels of trails that lead
Eastward where the streamlets flow,
Nor bird, nor beast, nor man to heed.*

*The valley pines wait there for me,
The lonely love they bear speaks soft;
Would that nigh them oft I could be
And pray 'neath busy tops aloft—*

*In twilight with them to look down
On beauty's fantastic web spun
With aides of all the wilds around,
And in the glory of the sun.*



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Commission Plans 1930 Campaign

PROGRESSIVE plans for continuing Montana's campaign of wild life conservation were completed at the meeting of the State Fish and Game Commission at the Hotel Baxter at Bozeman, April 11. Following the busy all-day session of the Commission, officials of the Department were guests at the annual banquet of the Bozeman Rod and Gun Club, of which Fred B. Williams is president and Dr. Howard Welch, secretary-treasurer. Those present at the Commission meeting were: T. N. Marlowe, chairman; E. A. Wilson, G. T. Boyd, W. K. Moore, Commissioners; Secretary Robert H. Hill; Dr. I. H. Treece and J. W. Schofield, Field Assistants; John C. Frolicher, Educational Secretary; J. F. Hendricks, Superintendent State Game Farm; George E. Mushbach, U. S. Game Protector; R. E. Bateman, Leader Predatory Animal Control; W. T. Thompson, Superintendent Federal Hatchery, Bozeman, Montana; Floyd L. Smith, Editor MONTANA WILD LIFE; Deputy Frank R. Marshall; and Fred B. Williams, President of the Bozeman Rod and Gun Club.

Mr. Marlowe was instructed to have Deputy Warden Morgan approve the claim of Lynn Brothers of Oando for hay fed to elk and deer by order of the Commission during the winter.

Secretary Hill gave a financial report of the Fish and Game Fund on March 31, 1930.

Mr. Hill advised that \$3,537.29 has been spent by the University of Montana Biological Research workers, leaving a small balance of \$4,000 appropriated for their work. He presented a claim for expenses incurred by Dr. R. T. Young for \$459.19, and a pay roll item of \$66. Mr. Marlowe stated that, with the payment of these two claims, he would advise the proper officials that the appropriations had been spent. Dr. Young's claim for expenses in the Biological Research work was allowed.

Letters and petitions from the sportsmen of Hinsdale, Saco and vicinity were presented, asking the Commission to open the Milk River to fishing. Mr. Hill explained that the Milk River had not been excepted in the general closing order by the Commission in September, and it was ordered that the Milk River, in Montana, be opened to fishing the year around.

A letter from Sam F. Harris, Forest Ranger at Augusta, requested that certain creeks in his locality be closed to fishing. Mr. Hill had requested Mr. Harris to secure a like request and petition from the sportsmen of that

vicinity, but as none had been received, the matter was laid on the table.

The petition from citizens of Troy, requesting the closing of Spread Creek, Peet Creek and Seventeen Mile Creek, in Lincoln county, for the purpose of restocking and thereby making feeders for the Yaak River, of which they are tributaries, was granted. A similar request from Deputy Warden Dorrington was granted.

Reappointed



E. A. Wilson



W. K. Moore

MONTANA'S State Fish and Game Commission will carry on. In full realization of the vast program of conservation in which the Commission is engaged, Governor John E. Erickson has reappointed William K. Moore of Billings and E. A. Wilson of Livingston as members for four years more. Their terms expired April 15, 1930. Mr. Wilson has been a member of the Commission since 1921 and has likewise taken an active part in affairs of the Montana Sportsmen's Association. Mr. Moore has been actively engaged in the work for state sportsmen since 1925. Few Montana residents travel through all parts of the state as does Billy Moore. Everywhere on his travels he makes conscientious efforts to meet and confer with sportsmen and then sponsor meritorious measures. The annual meeting will be held at Helena in May when the Commission will organize again. Thomas N. Marlowe of Missoula is chairman. Other holdover members are Joseph L. Kelly of Anaconda and Gilbert T. Boyd of Great Falls, with Robert H. Hill as State Fish and Game Warden.

Mr. Hill presented a petition which he had received from the sportsmen of Broadwater county immediately after the last meeting of the Commission, asking that fishing for whitefish through the ice in the Missouri River be allowed. In view of the fact that the ice has now gone from the Missouri River and no immediate action is necessary, the matter was tabled.

A petition was read from citizens of Gallatin county, Gallatin Gateway, asking that a fish ladder be placed over the dam across the West Gallatin River, which is owned by the Farmers' Canal Company of Bozeman. Deputy Frank Marshall reported that State Warden Hill, President Williams of the Bozeman Rod and Gun Club and he had inspected this dam last year and that they had found no fish ladder was necessary. He stated that the fish can go up and down stream without the ladder, hence the matter was tabled.

Dr. C. B. Rhodes of Butte suggested placing a dam in the river below the outlet of the Lower Red Rock Lake, thereby insuring a constant water level in the Red Rock Lakes, and providing a nesting ground for migratory birds. He advised that several Butte duck clubs were interested in this project and would like to cooperate with the state and federal governments. George E. Mushbach, U. S. Game Protector, advised that it is improbable that the federal government could appropriate money for this cause, unless it was done under the Federal Bird Refuge proposition. He brought word from Dr. Rhodes that as soon as he and an engineer could go to this district and get some accurate estimates on the cost and results, he would present the matter more definitely to the Commission.

Warden Hill asked the opinion of the Commission on the present status of the Madison River. The general order, made in September, had excepted the Madison River from the footbridge at the Game Warden's cabin below Hebgen Dam to where it empties into the Missouri River. However, the specific order of the Commission, in effect before this time, had excepted the Madison River from the regular closed season with the exceptions of those portions from the Red Bridge near Norris to the Lower Madison Dam, a portion of Meadow Lake, and from the Hutchins Bridge to where the Madison River enters Yellowstone Park, together with tributaries. It is Mr. Hill's contention that the specific order of the Commission is in effect, rather than the general closing order. Warden Hill's con-

ception of the closed and open areas on the Madison River were accepted by the Commission.

Fred B. Williams of the Bozeman Rod and Gun Club asked that the twelve townships in Gallatin county, all of Townships 1 and 2 N., Ranges 3, 4 and 5 E.; all of Townships 1 and 2 S., Ranges 3, 4 and 5 E., be open during the regular closed season, and was approved, effective at once. These townships had been affected by the general closing order, while the previous status of these townships had been that the closed season be from October 1 to December 15, instead of the regular closed season. Eastern brook trout are in the stream and they are more palatable during the spring months.

A petition from citizens in the vicinity of the DuRand Ranch asked that the elk liberated from the ranch be disposed of so that they will not do further damage to crops. Warden Hill reported that he had inspected that territory, but that by the time he reached Martinsdale there had been a chinook and the elk had moved away from the ranches. Question arose as to the legal ownership of these animals, whether they are property of the DuRands or of the state, and Mr. Marlowe was instructed to determine the ownership of the animals.

Senator John Survant of Phillips county requested that the Department secure elk or buffalo for a barbecue to be held in celebration of the opening of the Roosevelt Highway at the summit. Mr. Hill suggested that the Department might be able to secure either elk or buffalo from the Bureau of Biological Survey.

Mr. Hill read a copy of the cooperative agreement between the State Fish and Game Department, the Forest Service, the Bureau of Biological Survey and the National Parks Service, relative to the assignment of W. M. Rush in a study of the elk in the northern herd. Evan W. Kelley of Missoula, District Forester, requested that the warden sign this agreement if concurred in by the Commission. The agreement was accepted and the Secretary instructed to sign it.

The claim from Sidebotham Brothers of Corwin Springs for alleged \$150 damages to their crops by elk was denied, as was a similar claim from John Glass of Ovando for damage to his crops by deer.

Horace A. Bennett of Williston, North Dakota, asked a permit to take mussel shells from the rivers of this state, but it was denied.

John E. Lewis of Kalispell asked a permit to install traps to take suckers in Ashley Creek, the fish to be used as food for the foxes and mink on his fur farm. The matter was tabled.

E. R. Gleed of Lima offered his hatchery and ponds to the Commission. Mr. Hill was instructed to write Dr. Gleed that the Commission is not in a position at the present time to take over the hatchery at Lima, but appreciates his kind offer.

A letter from the Upper Musselshell Valley Sportsmen's Association of Harlowton was read, wherein that association advised that they favor the Educational Secretary making headquarters

Virginia's Pet



LITTLE Virginia, daughter of Mr. and Mrs. Ace E. Woods of Missoula, is shown in the picture fondling a fawn found in the grass near Nine Mile Creek. The affection of the tiny tot, however, may prove fatal to the fawn. Sportsmen have been warned by the Fish and Game Commission against molesting or handling fawns which they believe lost or strayed in the woods. Caressing by the human hands often causes the mother doe to desert the offspring. Fawns are seldom lost and if left where they are hidden by the mother, they seldom go astray.

at Helena; that they are on record as approving an increased license fee; and favor the Commission allowing individuals as many of the DuRand elk as they desire, providing they are enclosed and properly fed. Mr. Hill also read a telegram from Alva Hiers, President of the Custer Rod and Gun Club, Miles City, opposing any movement to place the Educational Secretary under control of the State Game Warden.

John Frolicher read a letter from Glen A. Smith, chairman of the Montana Sportsmen's Association, objecting to the Educational Secretary's making headquarters at Helena. Inasmuch as no movement had been made by the Department to change Mr. Frolicher's headquarters, no action was taken. Frolicher's salary is paid by the State Commission.

Mr. Hill read a request from the Southeastern Montana Sportsmen's Association at Laurel for two rearing ponds on the Stillwater River. It was also stated that the Hardin Rod and Gun Club would like rearing ponds built in that territory, and the two rearing ponds requested on the Stillwater River were ordered constructed during 1930. Officials selecting sites for these rearing ponds on the Stillwater were instructed to inspect sites for two rearing ponds at or near Hardin.

A letter was read from Fred J. Foster of the Bureau of Fisheries, in charge of national park investigations, asking the Commission for grayling to plant in Glacier and Yellowstone National Parks. Dr. Treece was instructed to inform Mr. Hill when grayling are to be released, and Mr. Hill to advise the proper park officials when grayling will be ready for distribution at the Somers hatchery for Glacier Park and at the Anaconda hatchery for Yellowstone Park.

Ed Boyes of the Libby Rod and Gun Club reported that the elk received last spring are doing fine. Among other things, Mr. Boyes requested that a new pipeline be put in at the Libby hatchery. Dr. Treece advised that to his knowledge the flume is safe and in good condition. Mr. Boyes also asked the Commission to cooperate with the club in building a rearing pond on Fisher River.

The Secretary was instructed to write the Libby Rod and Gun Club that the Commission is considering the building of a new pipeline at the Libby hatchery and that Dr. Treece will investigate this matter thoroughly and make his recommendations. Dr. Treece was also delegated to investigate sites for a rearing pond on the Fisher River and report to the Commission.

Warden Hill advised that the Stewart Mill Creek hatchery is not in use, and asked whether the insurance on the building should be kept up. Dr. Treece advised that the hatchery is not needed during spawning time, and stated he thought he could sell the building. Dr. Treece was instructed to see what he can get for the building and report to Mr. Hill.

A petition from the residents of Gallatin county asked that the Commission close the season on the hunting of female deer in that county. Mr. Williams advised that the Bozeman Rod and Gun Club is heartily in accord with this petition. Discussion arose as to whether the Commission has the power to restrict the killing of doe deer, leaving the season open to the hunting of buck deer. It was decided, however, that Gallatin county be closed to the hunting of doe deer for the season of 1930, subject to the opinion of the attorney general as to whether or not the Commission has the power to make such an order.

Warden Hill advised that the abstract for the Anderson Ponds at Emigrant (A. W. T. Anderson hatchery) had been corrected. Commissioner Wilson explained that the original error had been merely a mistake in copying the abstract and that county and state records agree. Mr. Wilson stated that the Miles Trust and Realty Company of Miles City, acting as agent for George M. Miles, owner of the property, had quoted a selling price of \$8,000 with all the fish in the ponds. Mr. Miles had requested, if purchase was made, a down payment of at least \$4,000, and the balance in a reasonable time. The property includes 17½ acres. The Commission voted to purchase it for sportsmen of the state.

John W. Schofield made a report of his investigation of the advisability of placing fire extinguishers in some of

the hatcheries. He said that the purchase of fire extinguishers would make little difference in the fire insurance premiums, and he suggested that the Department not purchase fire extinguishers.

Mr. Moore reported that he had investigated the advisability of opening the Little Big Horn River to fishing the year around, and the closed season was suspended from the mouth to the Wyoming line, tributaries not included, and it is therefore open for fishing the year around.

A report of the returns of the predatory animal contest for the year 1929 was made as follows: Five clubs in the state submitted scores for the contest. First prize (\$150) was won by the Big Timber Rod and Gun Club; second prize (\$100) won by the Lewistown Rod and Gun Club; third prize (\$75) won by the Northern Lewis and Clark Rod and Gun Club of Augusta; fourth prize (\$50) won by the Musselshell Valley Sportsmen's Association; and fifth prize (\$25) won by the Stanford Rod and Gun Club. According to the rules of the contest, a premium of \$15 is to be paid to each of these clubs submitting scores. The Big Timber Rod and Gun Club won \$40 for the highest score on predatory birds, \$40 for the highest score on predatory animals, and \$20 for the highest score on eggs of predatory birds. Miss Dorothy Cox, a member of the Northern Lewis and Clark Sportsmen's Association, won \$25 for making the highest individual score.

Commissioner Moore requested that Brook Stream, within Pioneer Park, at Billings, be closed to fishing for two years, in view of the fact that it is being fished considerably, and the fisherman are damaging the park property, and his motion was approved.

Mr. Moore advised that his investigations had shown that the dams at Crow Agency, in the Little Big Horn; at Intake, in the Yellowstone, and in the Tongue River above Miles City, need to have fish ladders constructed. Secretary Hill was instructed and authorized to see that proper fish ladders are installed.

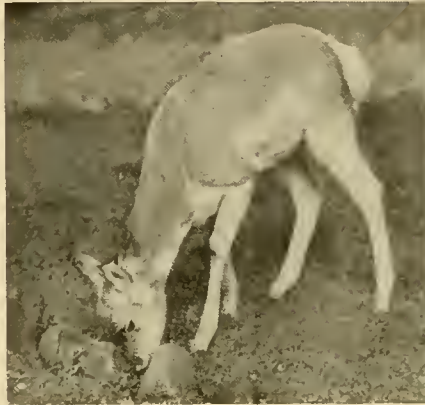
Mr. Schofield reported that he and W. T. Thompson of the Bureau of Fisheries would locate sites in the Stillwater for the two rearing ponds authorized.

Mr. Moore suggested that before planting the adult fish now in the Anderson Ponds, at Emigrant, they should be tagged for experimental purposes.

Mr. Moore reported that he had been investigating building a dam at Fox Lake, near Lambert, in Richland county, to keep water in the lake and thus make it a nesting place for migratory birds. He stated that he had written the Northern Pacific, which owns the lake, to ascertain whether they had any objections to flooding the lake. He discussed his plan for buying some of the acreage around this lake and the matter was turned over to Mr. Moore in all its details. Mr. Marlowe advised that he had sent some duck food to Fox Lake.

Mr. Boyd suggested that, in closing streams for propagating and restocking purposes, he believes it would be foresighted always to leave the headwaters

Kid Antelope



CIVILIZATION has almost wiped out the antelope. The herds of thousands that once dotted the plains of eastern and central Montana have dwindled to a few protected hundred. They have gone the way of the buffalo. This picture of an antelope kid denotes that what few that remain are increasing. Then, again, inroads are being made on these little Montana bands when they stray to Indian reservations. Indians, wards of the federal government, are permitted through some mistaken ruling of their federal guardians, to fish and kill at will on their reservations, despite state laws. Recent slaughter of these beautiful little animals near Cut Bank have been traced to Indians, yet appeals to the federal government have proven futile.

of the streams and some of the feeder streams closed.

Mr. Marlowe advised that O. V. Sanderlin of Missoula has perfected a fish screen which he, Mr. Marlowe, is confident will prove successful. He also stated that M. R. Jeffry of Henderson has a fish screen which might be workable. The Commission appropriated not to exceed \$250 to be used by Mr. Marlowe in assisting O. V. Sanderlin of Missoula in experimenting with the fish screen; and not to exceed \$100 to be used by Mr. Marlowe in assisting M. R. Jeffry of Henderson in experimenting.

John Frolicher gave a report of his activities up to April 1. He requested the Commission to furnish him with a car for traveling as Secretary of the Sportsmen's Association. No action was taken.

J. F. Hendricks explained that he had no truck at the State Game Farm, and that one will be necessary in transporting birds and eggs to towns.

Mr. Schofield reported that due to an electrical storm, the power in the Great Falls hatchery was turned off for 12 hours. The loch leven were planted in the Missouri River in this emergency, and the rainbow and brook trout saved by transferring them to the two gravity-fed ponds at the hatchery. He was authorized to have these two ponds concreted and to build a third concrete pond. He had a quotation of \$579 for this work in its entirety.

Mr. Schofield presented the bids which he had been requested to procure for the enlargement work at the Big Timber hatchery. He stated he had received five bids, the lowest of which is \$2,285, made by C. O. Pederson of Big Timber. Mr. Schofield was authorized to give this job to the lowest bidder, C. O. Pederson, for \$2,285, the work to be completed by June 15, 1930.

Mr. Wilson stated he thought the Department could secure land around Dailey Lake reasonable, and he was instructed to report at the next meeting.

Chairman Marlowe presented a petition from T. F. Carmody, Everett Naylor and W. A. Fredrick of Great Falls for permission to seine suckers in the Missouri River, and to take bullheads with hoop nets. Mr. Thompson advised against this permit, as did Mr. Schofield, and the petition was denied.

Discussion as to the liberation of birds from the Game Farm, and subsequent closed and open seasons on these birds, followed. It was suggested that some of the birds liberated be banded.

Mr. Marlowe suggested the erection of rearing ponds on streams in the western part of the state and Dr. Treece and Mr. Marlowe were authorized to investigate sites.

Mr. Marlowe reported that the Missoula River is badly polluted, and no information has been secured as to the source of the pollution. Mr. Marlowe was instructed to take up this matter with the University of Montana Biological workers, with a view of an investigation.

W. T. Thompson, Superintendent of the federal hatchery at Bozeman, gave a review of loch leven fishing conditions in the state. He explained that the Great Northern had given his department free transportation of fish to be taken to Glacier Park from the Miles City station. He asked that the Fish and Game Department explain to the Great Northern that many of the fish taken from this station will now be sent to other places in the state.

Mr. Thompson also explained that the federal government had agreed, as part of its cooperative work, to provide a pump for the Miles City station, to keep the water at a proper level, and that their funds are so low such a purchase is impossible. He stated that some means would have to be taken to keep the water at a level of not less than 5½ feet to save the fish in the ponds, and asked for cooperation from the Fish and Game Department in this project. As an emergency measure, Mr. Schofield was authorized to work with Mr. Thompson in providing means of keeping the water level at Lake Garberson up to not less than 5½ feet, the total amount of money to be spent by the two departments to not exceed \$600.

Dr. D. R. Crawford of the College of Fisheries of the University of Washington, was employed by the Department. He suggested that his work in this state would include drying suckers to be used for fish food. His experiments with this work have proven successful. Dr. Treece and Mr. Schofield recommended his employment. Dr. Crawford

was employed for the summer months at \$200 per month and expenses.

Mr. Marlowe read correspondence he had with Mr. Whitely, chief of the Bureau of Scientific Research, Fish and Game Commission of Ohio, relative to the propagation of Lake Superior whitefish in Montana. Mr. Whitely suggested many improvements which could be made in Montana in propagating whitefish. He offered to come at no salary, his expenses to be paid by this department, and work with the state fisheries men in investigating and bettering conditions. Mr. Marlowe was instructed to write Mr. Whitely to come to Montana at department expense.

Mr. Marlowe reported that bass are being taken from Nine Pipes Reservoir in such quantities that this reservoir should be closed to bass fishing for an indefinite period to avoid undue depletion, and action was taken closing the reservoir, located in portions of Sections 27, 33, 34 and 35, Township 29, North of Range 20 East, and in portions of Sections 1, 2, 3 and 11 in Township 19, North of Range 20 West, M. P. M., Lake county, Montana, until further order of the Fish and Game Commission.

Chairman Marlowe advised that he

Mostly Legs



MOOSE are increasing in Montana while under protection. This gangling moose calf, which runs mostly to legs, was snapped by W. M. Rush in southern Montana while Mother Moose watched eagerly from a distance, probably crooning, "Yes, Sir, That's My Baby."

had been making inquiry relative to hiring an expert to take moving pictures of Montana's wild life for the Department. He presented letters from Paul J. Fair of Berkeley, California, and others, and Mr. Marlowe was authorized to employ Mr. Fair, beginning May 1, at a salary of \$500 per month and expenses, to be employed for not less than six months, for the purpose of making these wild pictures for the Department.

J. F. Hendricks reported that S. F. Rathbun, Commissioner of the Washington State Department of Fish and Game, had presented the Montana Game Farm with a shipment of fancy birds from the Walla Walla Game Farm. He also stated that August Bade of Yonville, California, has offered to ship the Game Farm some fancy birds. The Secretary was instructed to thank Messrs. Rathbun and Bade for their cooperation.

Mr. Marlowe read a letter from Mr. Perry, State Game Warden for the state of New Mexico, asking that two pairs of mountain goats be sent to New Mexico for experimental purposes. Jeff White of Darby has agreed to undertake catching these goats and the offer was approved. The New Mexico Fish and Game Department has offered to send two dozen Gambel quail from their state in exchange. Mr. Marlowe was requested to thank them and to ask them to ship these quail to the State Game Farm at Warm Springs.

Mr. Marlowe reported that the Lake County Reclamation Service is raising the dam at Kicking Horse Reservoirs and will flood more than 675 acres. It is possible for the State Fish and Game Department to get a small piece of ground there for a nesting place if a government permit can be secured.

A petition was presented from the citizens of the northern end of Powell county, asking the Commission to extend the closed season to July 1 each year on the outlet to Cooper's Lake. Deputy Morgan recommended such ac-

tion, in view of the fact that the fish in the lake go down this channel to spawn each year, and when returning to the lake they are fished out. The petition was granted.

Mr. Marlowe presented a letter from Paul E. Haines of Two Dot, president of the Montana Fox and Fur Breeders' Association, asking when a committee of the Commission and their committee could meet to discuss problems of interest to both. Mr. Marlowe was requested to advise Mr. Haines to call on State Game Warden Hill.

The Flathead Game Protective Association and the Somers Rod and Gun Club requested the closing of Big Fork River from the power dam to Flathead Lake, for an indefinite period, and these petitions were granted.

Mr. Marlowe advised that he has a quotation from a dealer for valley quail at \$4 a pair. He stated that he would like to purchase some of these birds for liberation in western Montana. Mr. Hendricks advised that he thought they would thrive there. Mr. Marlowe was instructed to purchase fifty pairs.

Mr. Hill read a petition from the Red Lodge Club asking that loch leven be planted in the Clark's Fork River. Mr. Schofield advised against it.

Opposes Killing Does

BELIEVING that the privilege extended to hunters to kill does during the last season was a mistake on the part of hunters who made the request, and that it should be corrected before another season comes, petitions are being circulated among sportsmen of Gallatin county to have the Montana Fish and Game Commission return to the former system and ban the killing of does.

Petitions are being circulated in Bozeman with that purpose in view and by the eagerness with which sportsmen are signing them indicate to the circulators that at least 2,000 names will be signed as a protest to the present law.

When all of the signatures have been obtained the petitions will be forwarded to the Fish and Game Commission at Helena and action is expected to be taken before the open season for big game shooting begins, according to the Bozeman Chronicle.

The following is the petition:

"To the Montana State Fish and Game Commission, Helena: We, the undersigned residents of Gallatin county, realizing the serious damage which occurred during the 1929 hunting season to the deer of Gallatin county by reason of the restriction on the killing of does being lifted, respectfully petition your body to take the necessary action to close the hunting of doe deer in this county. We feel that such action is necessary prior to the 1930 hunting season to prevent danger of depletion of the deer in this county."

Gallatin sportsmen are to be admired for their courageous and timely stand, yet they have apparently overlooked the fact that the opening and closing of the deer season is a matter for legislative deliberation and must be taken up at the next session in January, 1931.

How to Fry Black Bass

IT IS one thing to catch a black bass and another thing to know how to fry it properly, according to Harry B. Hawes, United States Senator from Missouri, whose latest book on wild life conservation and the life of sportsmen in the open, "My Friend, the Black Bass," has just been issued from the press.

Senator Hawes' formula for preparing a savory mess of black bass runs about like this:

"Scale and wash the fish before cooking; don't skin it. Cut off the fins and head, cut down the back clear to the backbone. Open the fish, remove the viscera, wash and clean, then put a plentiful supply of salt and pepper on the inside. Roll in cracker crumbs or corn meal. Put enough butter, lard or bacon grease in the pan nearly to cover the fish. Heat the grease to the smoking point, and if the fish is not too large, put it in whole, with the skin on. If it is too large, cut it in half, not down the back but crosswise. Hold the cut ends in the grease for about half a minute until they are seared. You can tell when it is done by the feel. During the whole process keep in mind the retaining of the juices. Fish should be cooked through, thoroughly done, with no suspicion of rareness about them.

"After cooking, you may remove the flesh from the bones by running a fork down the side of the backbone. It will come away easily. Don't destroy the natural flavor of the bass with artificial condiments. Leave out sauces and the condiments."

Cavalry Sergeant: "For the love of Mike, don't shove your hand in that horse's mouth!"

Cavalry "Rookie": "I ain't, I'm trying to get it out."

Bounty Totals \$9149

STOCKMEN and sheepmen in 44 of the 56 counties of Montana have trapped, shot or poisoned coyotes during the last calendar year, the total reaching 4,241 coyote pups and 303 grown animals, in addition to three mountain lions in Missoula county. For these 4,544 predatory animals a total bounty of \$9,148 has been paid. This bounty comes from what is known as the biological survey fund made up by the State Fish and Game Department and the Livestock Commission. In many of these counties a greater bounty has been paid than the total amount expended for fishing and hunting licenses. The following figures provide food for thought:

Counties	Coyotes	Bounty Paid
Beaverhead	520	\$1,040
Big Horn	12	24
Blaine	245	490
Broadwater	8	16
Carbon	54	108
Carter	234	468
Cascade	106	212
Chouteau	55	110
Custer	13	26
Daniels	44	88
Dawson	116	232
Deer Lodge .....	.....	.....
Fallon	97	194
Fergus	810	1,620
Flathead .....	.....	.....
Gallatin	60	120
Garfield	32	64
Glacier	7	14
Golden Valley	7	14
Granite .....	.....	.....
Hill	462	924
Jefferson .....	.....	.....
Judith Basin	31	62
Lake .....	.....	.....
Lewis and Clark	5	10
Liberty	72	144
Lincoln .....	.....	.....
McCone	68	136
Madison	11	22
Meagher	3	6
Mineral	1	2
Missoula .....	.....	.....
Musselshell	42	84
Park	21	42
Petroleum	64	128
Phillips	354	708
Pondera	39	78
Powder River	113	226
Powell	4	8
Prairie	37	74
Ravalli .....	.....	.....
Richland	73	146
Roosevelt	271	542
Rosebud	1	2
Sanders .....	.....	.....
Sheridan	91	182
Silver Bow .....	.....	.....
Stillwater	97	194
Sweet Grass	39	78
Teton	66	132
Toole	6	12
Treasure .....	.....	.....
Valley	60	120
Wheatland	70	140
Wibaux	15	30
Yellowstone	8	16
Totals.....	4,544	\$9,149

Hunters are Busy

ACCORDING to the report of R. E. Bateman, leader of Montana predatory animal control, during March the hunters employed on cooperative work carried on by the Bureau of Biological Survey, the Montana Fish and Game and Livestock Commissions, killed 137 coyotes, 22 bobcats and three mountain lions. In addition to the predatory animals destroyed the hunters also reported taking 265 magpies, seven ravens and 42 porcupines. Other animals and birds accidentally trapped were two badgers, 10 skunks, six hawks, four eagles and two owls.

Reports received from 37 other co-operators, consisting of stockmen and sportsmen, have resulted in taking 220 coyotes, 10 bobcats, 1,095 magpies, six skunks, one eagle, two hawks and two badgers, making a total of 357 coyotes, 32 bobcats, three mountain lions, four badgers, 16 skunks, 42 porcupines, 1,361 magpies, seven ravens, two owls, five eagles and eight hawks destroyed through the cooperation of the State Livestock and Fish and Game Commissions, Biological Survey and stockmen and sportsmen.

C. E. Beebe, whose headquarters are at Columbia Falls, again heads the list for the highest average in points by taking three mountain lions, which give him a credit of 60 points. Major Vermandel and Ed Gunther took 10 coyotes each.

Deer Killed by Autos

MORE deer are being killed every year as a result of collisions with automobiles. Between 40 and 50 deer were killed in this manner last summer on one 25-mile stretch of road in Michigan, according to the state conservation commission.

To reduce such mishaps in the future, the Michigan department will post signs next summer at five-mile intervals between certain points, in the Upper Peninsula where such fatalities have occurred. The signs will read: "Slow at Night—Deer in Road."

Motorists are warned to realize the fact that such collisions not only damage wild life, but also endanger human lives and property. Tourists in particular desire to take advantage of the increasing stretches of good road being built through wilderness, game preserves and sanctuaries.

Investigation shows that the use of calcium chloride road salt as a dust layer was proving an inducement to the deer to frequent the highways at night. The headlights of automobiles confuse them so that they may be expected to do almost anything, often jumping suddenly from the ditch where they are more or less invisible into the center of the lights and immediately in front of the cars.

They're In the Velvet In the Springtime



—Photo by W. M. Rush.

THIS unusual photograph of a young bull elk with his horns in the velvet was taken near Yellowstone National Park by W. M. Rush, who has been commissioned by the Montana

State Fish and Game Commission, the U. S. Biological Survey, the Forestry Service and the National Parks Service, to make a study of conditions surrounding the great northern herd in Montana.

MONTANA STATE FISH AND GAME COMMISSION

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INCREASE THE LICENSE FEE

MONTANA'S enviable position as a paradise for sportsmen has for years been recognized by sportsmen throughout the nation. If the fish and game heritage is not maintained, if increased activities to meet inroads are made impossible, difficulties that now beset denuded eastern states are ahead for Montana. Clubs of sportsmen throughout the state have suggested an increased hunting and fishing license. Some have suggested an increase from \$2 to \$3 with a corresponding increase to non-residents.

During the last year, licenses were issued to 82,792 residents of Montana at \$2—just two bucks for 12 months' sport. This figure is the greatest in the history of the department. In 1928 the figure was 75,063, in 1927 it was 67,083, and in 1926 the mark was 71,249. In 1918 only 42,744 resident licenses were issued. These figures emphasize the gain in the continuing drain on fields, forests and streams, while at the same time funds demanded of the State Fish and Game Commission for increased facilities for stocking streams and fields have not increased proportionately. In 1918 only 741 non-resident licenses were issued, while in 1929 the total was 4,745. This is further proof of increased tourist travel that turns its way westward annually to enjoy Montana's hunting and fishing.

Montana sportsmen who are foresighted see the need of acquiring state-owned preserves, the distribution of duck food, and the employment of more deputy game wardens. Montana now has only 27 deputies covering the 56 counties of the state, many of these counties being larger than an eastern state. Bird sanctuaries must be established. More rearing ponds must be constructed to make possible the releasing of larger trout. The first game farm has been established and will this year release 3,000 birds for the 82,000 hunters. At least three additional farms should be established. Bounty should be paid on predatory birds and animals which menace game birds. Public shooting grounds are becoming mandatory with the grabbing up of desirable sites by private clubs. The wanton waste of wild life must be checked. Isolated lakes should be stocked with eyed eggs. Provision should be made for the purchase of feed for game birds during winter months and for elk and deer as well. More fish hatcheries and the construction of more tank trucks with which experienced men may plant fingerlings are becoming necessary. The leaks in game conservation must be plugged. Montana sportsmen support and maintain their own department. They have blazed the conservation trail in the past and will not fail in years to come. To accomplish these results increased funds must be raised. These suggestions may provide food for thought.

MONTANA'S STATE FLOWER

THE Bitter Root, state flower of Montana, will soon be blooming in nooks and crannies in The Land of Shining Mountains. This month's cover of MONTANA WILD LIFE presents a beautiful photo of a group of Bitter Root blossoms, taken by the Colville Studios of Missoula. It should be of value to every student in the state and of interest to devotees of wild life, whether it be forest and flowers or fish and game.

Once known only as a root which the Flathead Indians used as a vegetable, the Bitter Root became the symbol of spring to hardy westerners who had spent long months in snowbound isolation. It gave its name to a range of mountains and to one of the state's most fertile valleys and was crowned with honor when it became the floral emblem of the Treasure State.

Mentioned by Captain Meriwether Lewis in the journal of his expedition to the Pacific Coast in 1805 and 1806, the Bitter Root was christened *Lewisia Rediviva* by the Botanist Pursh, who was among the first to mention it in authentic scientific literature.

Captain Lewis mentions that Indians brought him several vegetable roots which he appreciated after a long meat diet. Some were exceedingly palatable, but the Bitter Root "had a very bitter taste which was nauncious to my palate and I transferred them to the Indians who ate them heartily."

Roots of the plant are starchy and form a paste something like that of flour when boiled. "It is a near relative of the cactus family and the flower is wholly like that of the cactus rose red," says Nuttall in a work written in 1834. The plant was described by Father De Smet in writing of his mission to western Montana in 1845.

Because of the sentiment developed in hearts of the pioneers for this first flower of spring in the Rocky Mountain country, the Bitter Root was chosen Montana's state flower in 1894 by the Montana Floral Emblem Society, of which Mrs. Matt W. Alderson was president. The following year it was officially named the emblem of Montana by the state legislature in a bill introduced by Representative Walter Cooper of Gallatin county.

LOGIC

It doesn't do to do much talking
When you're mad enough to choke
For the word that hits the hardest
Is the one that's never spoke.
Let the other fellow do the talking
'Till the storm has rolled away,
Then he'll do a heap of thinking
'Bout the things you didn't say.

BARBED WIRE KILLS DEER

MEANS of protecting California deer from being killed and crippled by barbed wire fencing during their migrations from one county to another are being sought by the Division of Fish and Game of the Department of Natural Resources and the Southern Pacific Railway Company. The latter organization is experimenting with a plan to prevent deer from being hurt during their journeys across Modoc county, where a new railroad right-of-way has been opened up. There is one particular stretch of country about eight miles long where many deer have been reported killed or crippled by being caught in the wire fence along the railroad track. One solution to the problem may be found by placing a board along the top of the fence, thereby marking the obstacle so that it can be seen by the migrating animals. If the plan proves successful, the Southern Pacific Company has indicated that the practice will be extended to the fences of the company for the entire distance where injury to animals has been reported.

PROTECT THE SONG BIRDS

MONTANA'S State Fish and Game Commission is just as much concerned about the preservation of song and insectivorous birds as it is about game, and to this end they again ask nature lovers to assist in the control of enemies of our feathered friends. One of the worst enemies of birds is the half-wild house cat. It probably destroys more valuable song birds and game than any other agency. Feathered vermin take a certain toll, and so do various mammals, and snakes, but these are kept fairly well under control.

Uneducated foreign-born residents must be watched, for in certain foreign lands no protection whatever is given song birds and the peasants kill and eat them all year around. Perhaps these persons can't be called willful violators—they are simply ignorantly following a custom they have been used to all their lives.

We must also guard against the over-enthusiastic boy, who, at a certain stage of his development, feels the urge to kill and plunder, and saunters forth with a sling-shot or air-rifle. Most boys need only to be told that they are destroying the lives of valuable wild creatures and they are sorry. Others have to be reprimanded.

Every Montana citizen should be interested in a program for bird protection. Every one benefits both from their economical and aesthetic values. If it were not for the millions of injurious insects and noxious weeds that the birds destroy each year, farmers, orchardists and gardeners would suffer losses in crops, fruit and flowers. Were it not for the birds starvation would overtake the country in a short time.

There has been much more interest taken in the study of bird life during the last few years than ever before. Bird clubs are hard at work; schools have adopted bird study as part of their curriculum; and Boy Scouts are building houses, bird baths, feeding, and otherwise helping to insure a happy livelihood for feathered friends.

A hunter who reaches a quarter of a mile for a duck is comparable to the baby who reaches for the full moon; the only difference is that the baby usually realizes his limitations after one or two ineffectual attempts.

NEW JERSEY SEEKS GAME LANDS

TO guarantee hunting and fishing privileges for all time to the sportsmen of New Jersey is the object of legislation in that state, now pending, which would allow the state to acquire permanent hunting and fishing rights on vast areas to be kept well stocked with game and fish, by providing funds through an increase of the present resident fishing and hunting fee from \$1.50 to \$3, one dollar to go into the land fund and the balance to be used to control species injurious to game and to abate pollution of public waters.

President H. J. Burlington of the New Jersey State Fish and Game Commission states that the proposed act would have the double advantage of putting the average sportsman in such a position as to enjoy the same privileges held by members of private clubs, and of discouraging the posting of lands. New Jersey does not stock posted lands.

"Since New Jersey has become a mecca for sportsmen, due to the extensive stocking campaign carried on by the Fish and Game Commission," says Mr. Burlington, "much of the best hunting and fishing areas of the state are being acquired gradually by newly formed sportsmen's clubs, organized for hunting and fishing purposes by people from out of the state. If stocking does not continue on a large scale, as at present, the state will revert to what it was 15 years ago, with a little native game, rapidly diminishing.

"Licensed hunters and fishermen have increased about 50,000 in the last few years. The increased stocks of fish and game have largely accounted for the leasing of large areas of land and waters by private clubs."

The point is stressed that owners who lease their properties to sportsmen are "killing the goose that lays the golden egg," because when their property is shot and fished out the state will not stock it for them. "It is the sportsmen's money, without any expense to the general taxpayer, that protects the owner from illegal pot-hunting, protects the insectivorous birds, destroys the vermin through the warden service and saved and built up the great hunting and fishing resources the state now enjoys."

BIOLOGISTS TO STUDY LIFE IN FORESTS

TWO research biologists have been appointed to positions in the Bureau of Biological Survey, U. S. Department of Agriculture, in accordance with cooperative plans to place qualified biologists at experiment stations of the Forest Service. These scientists will study the relation of wild life to the forests, as authorized by the recently-enacted McSweeney-McNary Forestry Research Act.

Thomas D. Burleigh, for the last nine years head of the Division of Forestry of the Georgia State College of Agriculture and one of the appointees, has been appointed to the position of associate biologist and will be stationed at the Appalachian Forest Experiment Station, Asheville, N. C. He is a graduate of Pennsylvania State College and the University of Washington. He has devoted considerable time to the study of the bird life of Georgia.

Oliver L. Austin, Jr., of New York, a graduate of Wesleyan University and who has done three years' graduate work in Harvard University, has been appointed assistant biologist to carry on studies of wild-life and forest relationships at the Lake States Forest Experiment Station, St. Paul. He spent the summer of 1925 studying jungle ecology in British Guiana, South America, and has made three trips to Labrador to study the distribution of the vertebrate fauna of the region. On his Labrador trips he did notable work in bird banding, particularly with Arctic terns, in cooperation with the Biological Survey. Two of the terns were recovered, one in France and another in South Africa, establishing remarkable flight records, the latter flying the longest distance of any handed bird ever recaptured, as far as any known records show.

Of all inventions, the alphabet and the printing press excepted, those inventions which bridge distances have done most for civilization.—Macaulay.

ALASKAN SKINS VALUED AT \$1,500,000

SKINS of fur-bearing animals to the number of 297,448 and valued at \$4,513,863.76, were exported from Alaska in 1929, a report from the Alaska Game Commission to the Biological Survey of the U. S. Department of Agriculture shows. This is \$215,226.63 more than the amount of the 1928 sales, although 38,629 fewer furs were exported. The larger return during 1929 resulted from increased market value of the individual furs. The report is based on statements that fur shippers are required to file with the agents of the transportation companies handling the shipments, or with postmasters in case shipments are made by parcel post. These in turn must forward the statements to the Alaska Game Commission. Red fox skins to the number of 21,023 brought a return of \$1,042,740.80; blue fox skins, 7,976, brought \$808,208.08; white fox skins, 12,179, brought \$733,784.75; mink, 26,695, brought \$552,586.50; and lynx, 7,575, brought \$462,832.50. The number of muskrat skins shipped in 1929 exceeded by far those of any other species. A total of 190,377 muskrat skins brought a return of \$194,184.54. Only 1,547 beaver skins were exported in 1929 because there was no open season.

The kinds of skins of which there was a notable increase in number exported during 1929 over the number for 1928 are as follows: Red fox, 5,884 increase; white fox, 7,646; lynx, 2,598; mink, 5,658; and weasel (ermine), 7,214. Skins of other species showed somewhat of a decrease.

The report also notes that more than 34,000 seal skins were taken on the Pribilof Islands under the supervision of the Department of Commerce, and netted a gross return of \$721,000 to the United States as its part of the proceeds.

When the Silver King splashes and plays in the clear, green waters—there is royal sport for the wielders of the split bamboo.

QUAIL TAKES A RIDE

AN engineer piloting a train between Chambersburg and Hagerstown, Pa., startled a covey of quail feeding near the tracks and which flushed directly in front of the engine, giving the engineer the impression that several birds may have been killed. When the train arrived at Hagerstown the engineer discovered two Bob White quail crouched very low on the pilot of the engine. Aside from being badly frightened the birds were apparently not injured. The engineer secured the two birds and on his return trip released them in Pennsylvania close to the spot where they were flushed.

Mr. and Mrs. Short Ears and Family

By JOSEPH BALDWIN HALM, Missoula, Montana—With Photos by the Author

FEW would hope to obtain results in taking pictures of wild life with the whole family at their heels. But what's a fellow going to do when he has both the inclination to take pictures and the family, and all four of that family, ardent Nature lovers, keen and anxious as himself for the sport? Take them along, of course, and I must confess the day would be totally spoiled without them.

Those who have had the good fortune to pass through the beautiful valley of the Flathead in western Montana, in summer, will doubtless recall having seen large tawny hawklike birds skimming over the fields or silently eyeing the passerby from some nearby mound or post. This is the short-eared owl (*Asio Flammeus*), commonly known as the marsh owl. Great numbers of these birds come annually to this region to breed and rear their young. Being interested in their economic value, I made them the object of special study last year and have proven to my own satisfaction, at least, that they are very useful and beneficial, especially to the agriculturist in whose fields they spend their summers, preying upon the destructive rodents which so heavily infest parts of this valley.

Nature has endowed this bird with a color scheme admirably adapted to its nest surroundings. The young change color rapidly from downy white to a dull grayish brown.

The mature bird is clothed in a mottled brown topcoat, a striped vest of varying lighter shades of brown and feathered leggings. In flight it appears much lighter, often, almost buff.

The early arrivals from the south probably start nesting about April 1st, for on April 13th we found our first nest with a full quota of nine eggs, which seems to be the popular number in this locality, and although I have seen as few as seven, one had twelve, which undoubtedly is a rare exception. In our daily rambles about the fields and pastures we found many nests, all

in the open with no apparent effort made to conceal them.

In direct contrast to most owls, the short-eared is almost wholly a diurnal bird. Although their natural time to hunt seems to be morning and evening, I have counted as many as twenty soaring and darting over a field in the bright sunlight of midday.

These birds are silent hunters, skimming low over fields and pastures in graceful hawklike flight, often picking up small rodents without alighting; or, zigzagging to earth with incredible speed, to seize the unwary prey.

This owl is truly a ventriloquist. Often at dusk, when they are resting, one may hear their call, a low, quick ooh, ooh, ooh, given with a rising inflection and repeated from three to five times.

The direction and distance from which the call comes is extremely deceptive and to confuse the hearer still more, a

At that instant, almost unobserved, from beneath our feet another owl rose silently into the air. The children dashed for the spot.



The hopeful Mrs. Short Ears was always on the nest, reluctant to leave.

"Oh! look! a nest 'n' four white eggs."

In a little open space among the grass and asters, upon a scant layer of straw and litter, were four white, almost transparent eggs.

The nest, hardly worthy of the name, bespoke plainly the shortcomings of the housekeeper who certainly did not believe in frills.

The excited owls now circled directly overhead, darting at us, all the while clapping their wings, snapping their mandibles and screaming in a frantic effort to frighten us away.

Daily as we returned to visit this nest the sentinel, Mr. Short Ears, would be waiting for us on a post, his favorite perch. Invariably he would rise and circle toward us, coming nearer and nearer as we approached; his tactics never varied. The hopeful Mrs. Short Ears was always on the nest reluctant to leave, until almost stepped upon. The number of eggs increased almost daily until May 23, when there were nine.

On June 1, just one week later, we were delighted to find two of the eggs had hatched. The little black-beaked strangers, clothed in fluffy white down, were squirming blindly about among the eggs, no doubt searching for the warmth of the absent mother's breast.

The parents were now more frantic than ever over our presence; with talons lowered they swooped so near we could feel the swish of their wings as they darted by, snapping their beaks, clapping their wings and screaming eh, eh, eh, which in owl language probably meant go 'way, go 'way.

Unmindful of their protests and threats, I placed the camera cloth over



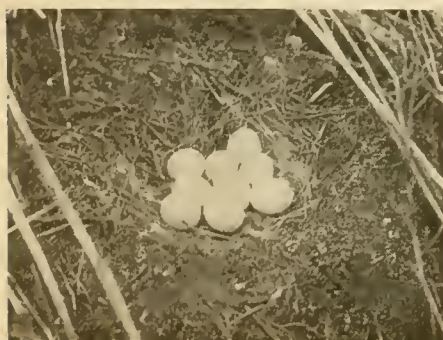
The eggs hatched on an average of one every two days.

friend will answer. These will sound like a whole flock calling from various directions.

On May 18 last year, loaded with cameras and tripods, we set out from our little lodge, as we had so often done, in search of nesting birds. We were tramping through the tall grass of a pasture when a short-eared owl appeared in the air, circling nearer and nearer until directly over us. There was a loud clatter.

"Oh, he's clapping his hands," cried our three-year-old son.

Sure enough, at the next evolution, the bird suddenly brought its wings directly beneath its body and beat them swiftly together.



On April 13 we found our first nest with a full quota of nine eggs.

my head preparatory to taking a close-up. Swish! the cloth rose into the air. There I stood, bareheaded and dazed. One of the birds had hooked the cloth with its sharp talons and carried it several yards. Although this little family became somewhat reconciled to the camera, which was often set as near as three feet from the nest, I can truthfully say they were anything but friendly toward me.

Unobserved I often watched Mr. Short Ears alight beside his mate and almost



Occasionally we found a young owl here and there near the home.

immediately one would depart. I sometimes wondered if it were not Mrs. Short Ears who had gone, leaving the nest in the care of her spouse, but for all my watching I was never quite sure. Probably Mr. Short Ears had just dropped in with a mouse for lunch and departed again.

The eggs hatched somewhat irregularly, on an average of one every two days. Since the mother bird rarely leaves the nest after the first egg or two is laid, incubation starts almost immediately, hence the progressive hatching.

When perhaps half the eggs were hatched, Mrs. Short Ears would leave the nest, first for short, then for longer and longer periods, probably helping keep the family larder apace with the ever-increasing demands of those greedy little mouths. Fresh mice and shrews were always on the bill of fare at the owl home. From our observations we estimated that this family alone consumed upwards of sixty rodents daily.

The first arrivals were now quite large. They clung so closely together in the nest that the remaining eggs were kept snug and warm during the mother's absences. What helpless, clumsy and overgrown creatures they were with their great stary yellow eyes, yet what an explosion of hissing and chattering of bills and ruffling of feathers when we touched them.

On June 14, just two weeks after we found the first downy bird, the last egg hatched. On that day we also found the oldest owlet missing. A search revealed the helpless little truant a few yards away where he had wandered. His dinner, a dead mole, which his parents had evidently provided, lay beside him.

As time went by the young, one by one, disappeared from the nest. Occasionally we found one here and there near the old home. It was nearly four weeks from the time the first baby hatched before the nest was completely abandoned.

Always during those many days from one to three field mice, moles, gophers or other rodents were lying about the nest. Although small song birds were plentiful everywhere, I am convinced that these owls did not prey upon them.

Pellets with scraps of bones, feet, tails and particles of skin from mice and ground squirrels were always lying about their perch but no feathers or other evidence of dead birds could we find.

One rainy day, perhaps a week after our owl family had abandoned the nest, I was walking by their old home when the familiar eh, eh, eh, of Mr. and Mrs. Short Ears caused me to pause and look about. I found two wretched little owlets lying unprotected upon the ground, almost drenched to the skin, their usual fluffy feathers bespattered with mud. Except for those alert yellow eyes and chattering beaks, I would have thought them dead. My first impulse was to take the unfortunate little creatures home to warm and feed



Two wretched little owlets, almost drenched to the skin, their usual fluffy feathers bespattered with mud.

them but decided Mother Nature could care for them better, so I left them huddled beneath a clump of friendly yarrow. I am sure they survived and with the rest of their kindred are now doing their part in policing the fields against the rodent pest, thus helping preserve the balance in Nature.

60,000 Pounds Carp In One Haul

THE McNeil brothers of Hinsdale have developed a new industry in northern Montana in seining carp from Nelson Reservoir, an artificial lake created by the Reclamation Service

for water storage for the Milk River project. The reservoir covers a vast area north of Bowdoin and possibilities of creating and conserving fish life of game varieties long ago attracted attention of the State Fish and Game Department. The Department entered into contracts with the McNeil brothers some years ago, under which they have systematically seined the reservoir as well as other large bodies of water in northeastern Montana, taking carp only for market purposes and returning all other varieties to the water. The carp is classed as a predatory fish and every effort is being made to prevent its spread.

These brothers have fished for eastern markets for years, formerly in Minnesota and of late years in Montana. They have a complete camp on Nelson Reservoir, ice houses, stables and fishing equipment, their seines ranging up to 3,500 feet in length, the large sizes being used for deep water fishing. A record haul was made when 60,000 pounds of carp were taken at one time, the catch having been made under ice.

The fish are stored in live boxes 14 by 14 by 10 feet until a shipment is to be made, when they are packed in iced containers holding 75 pounds of fish each. Under favorable conditions a car containing 30,000 pounds of fish can be loaded for New York and Baltimore markets in half a day. Eight cars have been caught under the ice and six cars in free water. The 14 cars have gone to eastern markets, while two cars have been consumed by Montana and North Dakota markets, the price range being 3 cents a pound for No. 2 fish under three pounds in weight, while fish of more than three pounds bring 5 cents at eastern markets. A crew of from 9 to 12 men handles nets and the McNeil brothers expect to continue seining for some weeks to meet the demand for carp from the orthodox Jewish population of large eastern cities.

"Darling, we have been married five years today, and, as usual, I have baked an anniversary cake."

"So thoughtful of you, dear," replied the husband, "I look back upon the other cakes as mile-stones."



Fresh mice and shrews were always on the bill of fare at the owl home.

The Importance of Obscure Fishes

Written for MONTANA WILD LIFE by D. R. CRAWFORD, College of Fisheries, University of Washington

SPORTSMEN and commercial fishermen are apt to be impatient with the so-called worthless fishes. Since such fishes are not good to eat nor furnish sport in catching them, what value do they have? Why not destroy them at every opportunity? At first glance it appears reasonable to suppose that the presence of undesirable species is to be prevented whenever and wherever possible. However, the more we study fishes, the more we realize that the obscure fishes have a very important place in the economy of Nature.

Sportsmen are eager to stock all available waters with game fishes of all sorts. Have these men given any thought to the food supply of the game fishes? What, for instance, do bass and trout eat, and how much food will be required to allow the fish to reach large size? What do young fishes eat?

There are various ways of obtaining information as to what fishes eat. We can watch the fish under natural conditions and try to see what they eat, but such observations are difficult and the conclusions drawn are usually erroneous. A more certain way is to examine the stomach contents of the fish.

It is perhaps well known that all game fishes will take a live bait, or something resembling a live bait in appearance or actions, and that live minnows are very frequently used for bait. Why are such baits so successful?

When the stomach contents of large numbers of game fishes are examined, the conclusion reached is that small fishes of all sorts make up a large part of the diet of the larger game fishes. It is this predaceous habit that makes the game fish what it is. If this is the case, how can the permanent stocking of any body of water with such fish be successful unless there is an abundance of smaller fishes to furnish the food supply?

There is frequent complaint that many bodies of water contain small game fishes and the fault is said to be due to degeneration of the stock. Let us consider this proposition. There are numerous lakes and ponds throughout the United States which have been caused by glacial action and in which fish have existed since post glacial times. It is known that in some cases such lakes contain an abundance of fishes and that individuals are large for the species. For example, Sebago Lake in Maine contains smelts and salmon which were noted for their size. Since access to the sea from this lake has been blocked for hundreds of thousands of years, during which time no new additions to the fish stock were possible, it is reasonable to suppose that degeneration of the brood stock would have taken place. Comparison of the land-locked smelts and salmon with marine forms of the same species

shows that there has been no decrease in size.

Many instances are known where ponds contain black bass mature at only a pound in weight. Yet the same species reaches a weight of 15 pounds in Florida. Trout in swift streams rarely, if ever, reach a size as large as the same species in a large lake.

Now if we examine all of the cases where the average size of the fish is small with all of the cases where the average size of the fish is large, we find that the small size and large numbers usually go together and that where there are large fish they are usually few in number. Sometimes this is not so, but we shall examine these apparent exceptions later.

Why should a crowded condition be accompanied by small size? Many careful experiments have shown that the rapidity of growth and ultimate size of the fish depend directly on the amount of food supplied to the fish. This is obvious when we compare land-locked chinook salmon with specimens of the same species and age from the sea. Where large numbers of fish occur in a rather limited body of water the food supply must inevitably be reduced to the quantity which it just sufficient to maintain the lives of the fish, without producing rapid growth. When such a balance has been reached the numbers of fishes will not increase, nor will any of the individuals reach a large size. The natural food supply will be just sufficient for a definite number of fish. If more than this number of fish are added to the population they must either starve to death or the whole stock decreases in size. In other words, there is a very definite relation between the total bulk of fish and the total bulk of natural food.

If we destroy such a balance either by reducing the number of fish or adding to the food supply the result will be an increase in the size of the fish. Where there is a very abundant natural food supply we may obtain large numbers of large fish in a limited area under natural conditions, but introduction of additional fishes may result in reduction of size although the food supply is unimpaired.

It is found that where game fishes are large and abundant there are also many small fishes such as minnows, darters, bullheads, and the young of suckers, chubs, etc. This relationship is too significant to overlook. Knowing that game fish subsist largely on smaller fishes and that to obtain large size a game fish must have abundant food, it is hard to understand why so little thought is given to the source of this food. It is not too much to say that without the suckers and chubs and the little redbfish, we would not have large cutthroat trout or bass in our lakes. The young of the sucker and minnows are hatched at a time when

fingerling trout would find them most acceptable as food.

It has not yet been shown that the presence of suckers or chubs has resulted in reduction of trout or other game fishes. Under observation in aquaria it has been noted that these fishes eat materials which are not touched by any game fish. The conclusion is reached that these fishes do not compete with the game fish in food supply. These fishes are generally considered as enemies of the trout and bass, but proof is lacking that this is the case. Therefore, the policy of destroying these fish is a short-sighted one.

Considering that an abundance of sport fish is desirable and that more sport is obtained with large fish than with small fish, the best results are obtained by seeing to it that the food supply is maintained and increased in waters into which sport fishes are placed. It is submitted that the native suckers and chubs supply this demand and that without them successful stocking of waters with large game fish will not be permanently successful.

The quantity of food which a trout requires to maintain its existence without much growth is known to be about 1.5 per cent of the weight of the fish in dry food per day. Since small fish usually contain 40-60 per cent water, the actual weight of food eaten would be greater than 1.5 per cent of the weight of the trout. Thus, a 2-pound trout will require at least 0.08 of a pound of food a day, or in 100 days it will consume 8 pounds of food. If the fish is to increase in size probably 10 pounds of food will be required. Actually, the amount consumed may be more than this. Under observation, six cutthroat trout whose aggregate weight was about one pound actually ate a pound of meat a day. From this it can be seen that 100,000 two-pound trout, in the course of a summer, will require a minimum of 400 tons of wet or live food. Bass require fully as much.

From the foregoing an idea may be obtained of the futility of stocking small ponds with large numbers of bass or trout without adequate provision for a food supply. The natural and most certain method is to introduce small fishes which will reproduce abundantly and thrive on food materials which the game fish can not use.

MAKE A DRINKING CUP

Take an empty milk or corn can, a piece of baling wire about eighteen inches long; crimp the open edge of the can down smoothly; fasten the wire around the top, then leave it slack and fasten around the bottom of can, then bring back up to top a couple of times and you have a nice drinking cup with a handle which will be especially handy in drinking hot coffee.

Butte Anglers Club Hits High Spots



J. L. Boardman

MONTANA sportsmen unanimously rejoice in the success of the activities of The Butte Anglers' Club, which held its twenty-sixth annual meeting April 1 in the shadow of "the richest hill on earth." With a membership of more than 2,000 and the goal for 1930 set at 3,000, the Butte Anglers' Club has become a dominant factor in fish and game conservation affairs in Montana. Under the leadership of President William Carpenter and his associates, creditable strides have been made, one of the most complete hatcheries in the state is being operated at Divide and an extensive rearing pond at Maiden Rock is now contemplated. At the annual meeting the Butte Anglers' Club voted to become affiliated with the Montana Sportsmen's Association and will have delegates at the annual meeting in May.

The re-election of the old officers of the club and an address by Robert H. Hill, State Game Warden, featured the meeting at Butte at which more than 100 were present.

The club accepted with regret the resignation of Arthur Perham, treasurer of the organization continuously for the last 25 years, and the resignation of John L. Boardman, secretary for the last three years.

William Carpenter was again elected president; John Berkin, vice-president; P. K. Ramsey was elected secretary to fill Mr. Boardman's place. The new treasurer will be selected at a later date by members of the executive committee.

Mr. Hill, who went to Butte from Helena to attend the meeting of the Butte club, the largest sportsmen's organization of its kind in the state, complimented the club on its initiative in the work of planting fingerlings and other activities in the interest of fish and game conservation. He outlined the work of the State Fish and Game Commission during the year, explaining that the installation of the new game farm at Warm Springs and the spawn-taking station at Lake Francis at Valier were the two important projects undertaken by the state body. Both are successes, Mr. Hill said.

The state needs more spawn-taking stations and more game wardens, the State Game Warden declared. He explained that Montana is attracting more and more sportsmen from all over the country each year and residents here must keep streams stocked and game protected to keep Montana the sportsman's paradise that it now is.

The Butte Anglers' Club planted almost 2,500,000 fish last year and this year plans on increasing that amount, Mr. Carpenter told members in his annual report. Trout planted included rainbow and native while more than 1,000,000 grayling were stocked in the streams of this territory, the president said.

The Divide hatchery of the club, completed last year, is probably the finest in the state and with the installation of 20 troughs for the fingerlings is one of the most complete in the state. This year's plans include the erection of a rearing pond on the Big Hole River near Maiden Rock, although funds for the work will not come from the Anglers' Club, it was stated. The rearing pond will complete the Butte club's plant and make it one of the finest in the Rocky Mountain states, the president told members.

The club plans to secure 3,000 members this year and will need that many memberships to complete its annual program of work, the president and other officers informed the members. More than 2,400 members were on the books for 1929, it was stated. Expenses of hospitalization of the club's hatchery caretaker, who broke his leg last year, cut heavily into the club's finances, the treasurer pointed out, more than \$700 being paid out, although donation of doctor's bills and cutting down of hospital expenses made the bill much smaller than it would otherwise have been, Mr. Perham said.

Montana is attracting more sportsmen than any other state in the Union, and its reputation as a paradise for fishermen and hunters is well established, William Tanner, a Minneapolis sportsman who attended the meeting, told members.

A plea that members subscribe for MONTANA WILD LIFE, official month-

ly publication of the State Fish and Game Commission, was made by the president, who pointed out the work of the state body. The club voted to become affiliated with the Montana Sportsmen's Association, a state body which is doing yeoman work in promoting adequate legislation for game and fish and the conservation of wild life of the state.

Addresses were also made by Col. D. G. Stivers, pioneer member of the club and president for many years; Larry Hamilton, veteran member of the club, and others.

Appointment of committees for the membership campaign which will be inaugurated shortly, and the naming of John L. Boardman as chairman of the rearing pond committee, were announced by President Carpenter.

Shelby C. Sweet was named chairman of a committee of 24 which will head the membership selling campaign, at which the club hopes to secure a total of 3,000 members to raise the \$3,000 necessary to carry out the year's work. Mr. Boardman will name his own committee members to complete plans for the surveying of the ground for the rearing pond, purchase of the ground and completion of the project, Mr. Carpenter announced. Eddie Hamner, George O'Malley and Law Risken were appointed members of the publicity committee.

Men named on the membership drive committee included Al Jackson, Carl Spillum, William Beaty, P. K. Ramsey, William Medlin, Dr. T. A. Tash, Walter Ballard, E. J. Rule, Paul Rooney, Russ Pelletier, J. B. Amos, W. L. Chapman, Alex Walker, R. E. Crangle, J. W. Curran, Homer Hagens, Fred Huotte, H. R. Falconer, A. E. Saner, R. L. Thomas, Alex Blewett, Ben Hardin, Alex McNeil and Harry Dahlberg.



Butte Anglers' Club Hatchery at Divide

Montana Fights for Migratory Waterfowl

WHILE Montana's State Fish and Game Commission is waging relentless warfare for the conservation of wild life within the borders of the Treasure State, it is likewise extending the scope of its activities to marshes and waters in adjoining states through which pass migratory waterfowl on the annual pilgrimage to shooting grounds in Montana and its environs. Protection of public waters from pollution by oil wastage, and thereby protecting migratory waterfowl which eventually may find its way into The Land of Shining Mountains, is a matter of national import, in which Montana's Commission is playing a part.

Representative Hudson of Michigan has introduced a resolution (H. R. 10625, 71st Congress, 2nd Session), which has been referred to the Committee on Rivers and Harbors, intended to safeguard navigation and commerce upon all navigable waters and to prevent destruction of migratory birds, resulting from wastage of mineral oils. Hearings are expected in April.

Chairman Thomas N. Marlowe of Missoula, of the Montana State Fish and Game Commission, on behalf of the board, has again demonstrated the keen interest of leaders of Montana sportsmen in problems of this nature, by addressing communications to representatives of the state in Congress. His letter to Representative Scott Leavitt at Washington, D. C., follows:

"I have just received from Congressman Hudson of Michigan copy of H. R. 10625, introduced in the House March 10, 1930, which is a bill to amend an act to protect navigation from obstruction and injury by preventing the discharge of oil into coastal navigable waters of the United States, approved June 7, 1924.

"The interest we have in this legislation is added protection it will afford to migratory birds, and the further fact that in our opinion it will prevent destruction to fish and fish food. In the past few years since oil has been used so extensively for fuel in engines of various types, thousands of migratory birds, and especially migratory waterfowl, have been destroyed along our coastal waters and navigable streams. You may not realize it but this is undoubtedly true. The oil on the water causes a scum to form on the surface of the water and when the ducks and geese light into this the oil clings to their feathers and eventually prevents their being able to fly.

"Another thing you might not be aware of is that while we are located quite a ways from coastal waters of any kind, hundreds of thousands of our migratory waterfowl migrate from here to coastal waters in the winter time. On the Bison Range near here thousands of ducks are banded each year for the purpose of determining their line of flight when they leave here. In fact, this place is one of the largest, if not the largest, duck banding place in the United States. We ourselves were much surprised to learn that of the ducks banded at this place and killed outside of Montana, 65 per cent were killed along the coast of California. Not only this, but from duck banding experiments carried on in eastern Montana we find that many of our birds from that section of the state go to the Gulf coast, hence you see our direct interest in this legislation.

"While we are not so greatly interested in this phase of the matter, we know also that oil is injurious to fish life and a menace to fish food and we would like to see this legislation enacted for the benefit it will do in this respect.

"I have been advised that there will be a hearing in Washington before the Committee on Rivers and Harbors. On behalf of the sportsmen of this state I would like to have you attend this meeting and voice our ideas to this committee, and if need be, later on to voice them upon the floor of Congress."

Word from Washington is to the effect that the tentative draft for the bill is based upon the practicality and importance of completing a comprehensive program to regulate oil pollution on all the waters over which the United States has jurisdiction; all navigable waters and their tributaries so far as affecting navigation and commerce, the public fisheries, and those migratory birds covered in the Migratory Bird Conservation Act of 1918, and the feeding, drinking and resting places required for their existence.

The objective of the bill is not new legislation. The identical language essential to its needs and purposes has been approved previously, both by the Committee on Rivers and Harbors, by the executive departments concerned, and by Congress, with no opposition voiced.

This bill brings no serious hardship upon any business, industry, or community. Neither does it impinge on state rights. On the contrary it must be serviceable, through more definitive allocation of state and federal powers and duties, by leaving to state and local authorities the protection of health; local scenic areas and facilities for recreation; regulation of the local fisheries and other public biologic assets; the protection of private property, private and public rights; provisions against fire hazards, etc.; and by providing federal jurisdiction to meet required regulation and control to prevent obstruction and injury to navigation and to commerce, to check the existing wasteful destruction of wildfowl by pollutants; to avert destruction by oil wastages of the food plants of ducks, geese, swans, and of the feeding and resting places upon which many species of useful birds, protected by the Treaty Act; and also to avoid the ultimate extirpation of an important source of national food supply, viz., clams, oysters, shrimp, crabs, lobsters, et al., by Nature restricted biologically to limited areas of coastal waters, and par-

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ticularly to bays and estuaries. The pollution of such areas has already impaired the business of production and of nation-wide distribution of shellfish. Greater destruction is already imminent, with vaster potential damage.

Oil pollution prevents extension of employment to skilled and unskilled labor through development of artificial propagation of fish and shellfish; and industry, as practical as agriculture, and almost as necessary to the well-being of our nation, for the reason that sea food provides elements not included in meats and cereals. A large portion of the public waters naturally adapted for such cultivation is becoming so polluted that the products are unsalable. The result is an actual economic loss amounting to millions of dollars annually, and of unnecessarily high prices to consumers on account of the losses entailed by preventable pollution.

It is common knowledge that damages from wastage of oils is still extending over greater areas (notably from inland sources), that the damage done by oil on land and water is long enduring and expensive to repair; that existing conditions call for legislation, while it is still possible to avoid serious hardships to any business.

On January 14, 1929, the supreme court of the United States in its decision upon *States vs. Illinois and Sanitary District of Chicago*, warned, in principle, against the unwarranted use of public waters for scattering sewage and other waste substances.

As a result of the progressive, economic and social development of North America, areas (particularly in bays and estuaries) largely suitable for the production of edible shellfish and for winter feeding places for wildfowl, have become vastly restricted. Today, of the great original areas suitable for the most important migratory birds, there remain but relatively small portions, and adjacent marsh lands, notably in Louisiana, Texas, Virginia, North Carolina; supplemented by the few marshes remaining in Utah, Oregon and California. These constitute the remaining chief wintering areas, the maintenance of which is essential to the provisions of the Migratory Bird Treaty Act. Already impairment of these areas by

pollutants, particularly oil, at the hand of man, and often without compensatory advantages, has resulted in the wasteful killing and loss of millions (by summation of actual recorded counts) of wild ducks, valuable as a source of food and of recreation of mind, muscles, and senses.

Unlike sewage and most factory wastes, mineral oil is particularly dangerous from the fact that it is not dilutable in water, but has a remarkable tendency to spread into tenuous films which by preventing exchange of oxygen and other gases both on land and water check those processes which underlie the practice of agriculture, and even the existence of life itself. An almost microscopically small quantity of such oil may not only kill plants and animals, but may render land and water incapable of sustaining either plant life or grazing animals, from oysters to domestic cattle.

The effects of oil films, by enveloping particles of other dangerous pollutants, or of dust, causes them to sink upon and to destroy the feeding grounds of fishes and shellfish, thus seriously threatening those limited areas which by nature are adapted to the production of molluscs and the young of fishes. Such pollution has caused great economic losses to those business enterprises based upon the production and distribution of food products, by so circumscribing the areas suitable and available, that the public has felt the effects through increasing scarcity and higher prices, and by the necessity of laws and regulations which now protect the public from shellfish, which otherwise might be "bootlegged" from polluted areas.

These special facts should be considered, in addition to those which have become common knowledge, such as danger to navigation, to public health, to fish and other wild life, including the microscopic plants and animals, their eggs and young, upon which shellfish feed; to outdoor recreation; to swimming, boating and fishing; to clothing of children and of adult vacationists.

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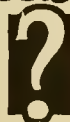
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Montana Sportsmen's Association

BUTTE CLUB ASSOCIATES

PRELIMINARY work on a rearing pond near the Divide hatchery has been started by the Butte Anglers' Club, William Carpenter, president, said recently. Engineers from Butte made a survey of the area that may be utilized. The Divide hatchery is the major problem of the Butte club. It is hoped that more grayling may be produced there, Mr. Carpenter said, and these planted in the Big Hole district. The club recently joined the Montana Sportsmen's Association. P. H. Ramsey is secretary of the Butte organization.

MEETING AT LAUREL

THE annual meeting of the Laurel Rod and Gun Club was held April 10. A banquet was followed by election of officers, T. S. Buford being chosen president and E. H. Ebersviller, secretary-treasurer. The membership drive for 1930 is well under way, W. L. Fenton leading in number of memberships sold. Mr. Fenton was one of the speakers at the banquet. Others included Al Holmes, deputy game warden at Billings; B. L. Price, R. T. Ferguson, supervisor of the Beartooth national forest, and the State Secretary.

BOZEMAN CLUB ELECTS

THE Bozeman Rod and Gun Club held its annual meeting April 11, following the meeting of the State Fish and Game Commission. Fred B. Williams, for many years head of the club, was returned to the presidency, and Dr. H. Welch, another old guard, was re-elected secretary. Allan Cameron was re-elected vice-president. The two new trustees are Gerald Collett and Dr. E. O. Holmes. Speakers at the banquet included the members of the Commission, Floyd L. Smith, editor of MONTANA WILD LIFE, and Game Warden Robert H. Hill. Motion pictures of elk, deer, big horn sheep and mountain lion were among the features of the affair.

BAINVILLE CLUB COMING

THE Bainville Sportsmen's Club will probably be represented at the state meeting at Helena in May, a letter from W. J. Forsyth, the secretary, states.

OUTLINE GAME PROBLEMS

SPORTSMEN'S clubs all over the state are urged to outline their fish and game problems and to send that outline to the State Secretary, in order that the problems the state body will consider may be put in the form of resolutions. The work will be done prior to the state meeting at Helena in May. Circular letters were sent to all clubs, both affiliated and non-member, the latter part of March. Replies have been coming to the state office during the past week, but all clubs are urged to send their programs in as soon as possible.

Yip Yap Has Bad Luck



WHEN Senor Yip Yap, the coyote, ventured too close to the Geraldine country during the last winter, it was a 10-to-1 shot that he ran into a mess of bad luck. The picture above shows a portion of the catch of A. Rosenberg during the last stretch of cold weather. The catch includes 45 coyotes, six badger and 52 of those nice little foxes with white stripes down their backs, sometimes coarsely referred to as a skunk.

MEETING AT LEWISTOWN

MEMBERS of the Lewistown Rod and Gun Club held a most successful smoker Wednesday evening, March 19, entertaining as guests of honor Commissioners G. T. Boyd of Great Falls and W. K. Moore of Billings; Game Warden Robert H. Hill, and the state secretary. Each of these men was on the program, Judge Roy Ayers acting as toastmaster. More than 300 sportsmen from Lewistown, Harlowton, Stanford, Winnett, Grassrange and Hobson attended the meeting.

HAMILTON CLUB MEETS

THE Hamilton Sportsmen's Club held its annual banquet Monday night, March 24. Mark Fitzgarrald of Stevensville was the principal speaker, urging a higher standard of sportsmanship. The other speakers included Chairman Thomas N. Marlowe of the Fish and Game Commission; Game Warden Robert H. Hill; J. F. Hendricks, head of the State Game Farm at Warm Springs, and the state secretary. James M. Brown of Missoula, former head of the Sons and Daughters of Montana Pioneers, acted as toastmaster. Matthew "Scotty" Brown, prominent stockman and sportsman of Missoula, expressed gratification at plans at the game farm. Two hundred sportsmen from Hamilton, Darby, Stevensville and Missoula were in attendance. The Hamilton club has affiliated again with the state organization. F. J. O'Donnel is president and Ward Sackett secretary.

IMPROVE FOX LAKE

BBETTER waterfowl hunting in eastern Montana was assured at the Bozeman meeting of the State Commission, when they authorized Commissioner W. K. Moore to work on the project of making a better nesting and rearing ground on Fox Lake, near Lambert. The clubs in eastern Montana will probably cooperate in this work.

DEER LODGE CLUB MEETS

THE Deer Lodge Anglers' Club held an interesting meeting April 18 for the purpose of considering the problems of trout planting that may arise during the summer. Neil Grogan, secretary of the club, considers the elk problem in Powell county one of the most important in the state, and will welcome suggestions about its solution. The State Fish and Game Department has been asked to send representatives to the meeting.

ROWAN HEADS LODGE CLUB

CC. ROWAN was elected president of the Red Lodge Rod and Gun Club at the annual meeting March 28, and Ed Pelo was re-elected secretary. The meeting was one of the largest affairs ever held in Red Lodge. Game Warden Robert H. Hill was among the out-of-town speakers. The club sponsored the Rodeo which will be held at Red Lodge in July. A. H. Croonquist, member of the governing board of the state association, is one of the prime movers in this community affair.

STILLWATER CLUB ELECTS

AW. De GROAT of Absarokee is the new president of the Stillwater County Rod and Gun Club, and James Graham of Columbus is the secretary of this organization. The club is one of those contributing to the work of fish planting in the southeastern part of Montana. W. C. Phil of Laurel is the man who plants the fry.

PLANTS AT NINE PIPE

PLANTING of tules and willows around Nine Pipe Reservoir, where the State Department has a nesting ground and public shooting site for waterfowl, was undertaken April 13 by members of the Western Montana Fish and Game Association. Bill Anderson led a crew of men from Milltown and Bonner for the greater part in the job, which will provide more shelter for the ducks that nest near the reservoir.

NAMES OF OFFICERS

NAMES of officers of all sportsmen's clubs in Montana, and, if available, lists of the members of these clubs, are wanted by the Secretary of the Montana Sportsmen's Association. The lists will be used to further the work of the association, and will form another link between the sportsmen and the State Department.